

REMARKS**I. General**

Claims 1-31, 33, 35-55, 57, 59, 60-67, and 72-85 are pending, and all are rejected by the current Office Action. Claims 1, 19, 36, 57, 59, and 60 are amended by this response, and claims 56 and 58 are canceled. The outstanding issues in the Office Action are:

- Claims 1-15, 17, 19-31, 36-40, 42-56, 58, 60, 62-67, 72-76, 78, and 80-85 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 6,044,355 (hereinafter, *Crockett*).
- Claims 16, 18, 33, 35, 41, 57, 59, 77, and 79 are rejected under 35 U.S.C. § 103(a) as being obvious over *Crockett* in view of U.S. Patent 5,572,625 (hereinafter, *Raman*).

Applicants hereby traverse the outstanding rejections and request reconsideration and withdrawal of the rejections in light of the remarks contained herein.

**II. Applicant's Record Under M.P.E.P. § 713.04 of Interview with the Examiner**

Applicant's attorney appreciates the Examiners' time and consideration in conducting the telephone interview of June 15, 2004. Applicant respectfully submits the following record of the telephone interview of June 15, 2004 under M.P.E.P. § 713.04.

The following persons participated in the interview: Examiner Md S Elahee, Primary Examiner Fan Tsang, and Applicant's Attorney Thomas Kelton.

The definition of "quantifying" from page 15 from the specification was discussed. Agreement was reached that an amendment which adds the definition of "quantifying" to the independent claims would not add new issues and would be appropriate at this time.

The independent claims were discussed with reference made to *Crockett*. No agreement was reached; however, the Examiners graciously offered to discuss the case again after this response is filed.

In view of the telephone interview of June 15, 2004, Applicant hereby presents amended claims 1, 19, 36, 57, 59, and 60 and arguments for all pending claims for the Examiner's consideration.

### **III. Amendments**

Claims 1, 19, 36, and 60 have been amended to clarify that "quantify" and "quantifying" means "beyond mere binary quantification," which is consistent with the definition given on page 15 of the specification. These amendments are clarifying amendments, and therefore, do not narrow the scope of the claims, nor are they in response to any art. That is, these amendments merely explicitly recite language that clarifies the meaning of the terms, "quantify" and "quantifying," and these are not intended to be narrowing amendments as they merely make explicit what was implicit from Applicant's definition of these terms in the specification.

Claims 57 and 59 are amended to depend from claim 36, which does not narrow the scope of the claims, nor is the amendment in response to any art.

### **IV. Claim Rejections Under 35 U.S.C. § 102**

Claims 1-15, 17, 19-31, 36-40, 42-56, 58, 60, 62-67, 72-76, 78, and 80-85 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 6,044,355 (hereinafter, *Crockett*).

#### **A. Claims 1-15, 17, and 80-82**

To anticipate a claim under 35 U.S.C. § 102, a reference must teach every element of the claim, see M.P.E.P. § 2131. Moreover, in order for a prior art reference to be anticipatory under 35 U.S.C. § 102 with respect to a claim, "[t]he identical invention must be shown in as complete detail as is contained in the . . . claim," see M.P.E.P. § 2131, citing *Richardson v. Suzuki Motor Co.*, 9 U.S.P.Q.2d 1913 (Fed. Cir. 1989).

*Crockett* fails to teach, at least, "quantifying at least one attribute desired by said at least one request beyond mere binary quantification," as recited by claim 1. *Crockett* instead teaches that calls are classified by type, as taught at Col. 5, lines 18-22: "It is further assumed that calls arriving at the call center may be classified according to so-called 'call types' based

on a dialed number and (possibly) other information, such as the calling number or some caller response to network prompts.” Crockett does not teach that “classification” can be more than mere binary quantification, but rather teaches that a call either conforms to a call type or does not conform. Thus, according to *Crockett*, the attributes desired by a caller are quantified in a mere binary fashion.

Further, Crockett recites at Col. 5, lines 12-28:

Skills designations may be further qualified, for example, as "primary" or "secondary" skills, or with some other designation of skill priority or degree of skill attainment. In the preferred embodiment, skill priorities are included when organizing agents into skill groups; in a particular skill group, all agents have the same skills at the same priority levels. It is further assumed that calls arriving at the call center may be classified according to so-called "call types" based on a dialed number and (possibly) other information, such as the calling number or some caller response to network prompts. In the paradigm of the present invention, each agent has one or more identified skills that make the agent available to handle particular call types. The principal goal of the invention is to create a work schedule for that agent (and other agents scheduled to work at the same time during a given scheduling interval) that maximizes the quality of service offered by the call center while making efficient use of call center resources.

The above-recited passage from Crockett teaches that the degree of skill or skill priorities of an agent may be used to create a work schedule for the agent by grouping the agent into a skill group with other agents who have the same skill level. That work schedule then allows more efficient use of call resources (e.g., to assure proper skill coverage over a shift). However, this passage only teaches that an agent’s skill degree may be qualified or prioritized for scheduling the times for each agent to work. The passage does not teach that the same qualification or prioritization is applied to calls as they are classified according to call type. Thus, *Crockett* fails to teach, at least, “quantifying at least one attribute desired by said at least one request beyond mere binary quantification,” as recited by claim 1 (emphasis added). Therefore, *Crockett* does not teach each and every limitation of claim 1.

Further, *Crockett* does not teach, “based at least in part on the quantifying steps, determining at least one suitable resource for servicing said at least one request.” The agents’ skill levels are considered in *Crockett* for scheduling work times for the agents, but quantification of the agent’s skills beyond mere binary quantification is not considered in determining an agent (that is at work) for servicing a given caller. Instead, *Crockett* teaches a

mere binary quantification in determining an agent to service a received call. For instance, if a caller desires an agent capable of speaking English, the agents are quantified as either capable of speaking English or not (binary quantification) in determining an agent for servicing the caller.

Claims 2-15, 17, and 80-82 each depend either directly or indirectly from independent claim 1 and, thus, inherit all of the limitations of independent claim 1. Thus, *Crockett* does not teach or suggest all claim limitations of claims 2-15, 17, and 80-82. It is respectfully submitted that dependent claims 2-15, 17, and 80-82 are allowable at least because of their dependence from claim 1 for the reasons discussed above. Accordingly, the withdrawal of the rejections of claims 1-15, 17, and 80-82 is respectfully requested.

**B. Claims 19-31 and 83-85**

Claim 19 recites, in part, “quantifying said at least one functional attribute desired by said at least one request, wherein said quantifying said at least one functional attribute desired by said at least one request includes grading said at least one functional attribute of each of said resources along a scale having more than binary grades.” *Crockett* does not teach, at least, the above-recited feature of claim 19. *Crockett* teaches qualifying a caller as one or more predetermined call types. See again Col. 5, lines 18-22. As mentioned above with regard to claim 1, classifying a caller as a call type is not the same as quantifying using “a scale having more than binary grades” because the classifying performed by the *Crockett* system is, at most, mere binary quantification and, thus, does not use a scale having more than binary grades. Further, the qualifying or prioritizing of agent skills is not the same as “quantifying said at least one functional attribute desired by said at least one request.”

Claims 20-31 and 83-85 each depend either directly or indirectly from independent claim 1 and, thus, inherit all of the limitations of independent claim 19. Thus, *Crockett* does not teach or suggest all claim limitations of claims 20-31 and 83-85. It is respectfully submitted that dependent claims 20-31 and 83-85 are allowable at least because of their dependence from claim 19 for the reasons discussed above. Accordingly, the withdrawal of the rejections of claims 19-31 and 83-85 is respectfully requested.

**C. Claims 36-40 and 42-55**

Claim 36 recites in part, “means for gradationally quantifying at least one attribute desired by said at least one request, wherein said means for gradationally quantifying at least one attribute desired by said at least one request further includes means for grading said at least one attribute of each of said resources along a scale that includes more than two grades.” *Crockett* does not teach, at least, this feature of claim 36. As explained above with regard to other claims, *Crockett* teaches classifying a caller by call type, not “grading...along a scale that includes more than two grades.” Further, the qualifying or prioritizing of agent skills is not the same as “quantifying at least one attribute desired by said at least one request.”

Additionally, claim 36 recites, in part, “said means for determining computes a difference between the quantified at least one attribute of said resources and the quantified at least one attribute desired by said at least one request to identify at least one of said resources that is suitable for servicing said at least one request.” *Crockett* does not teach, at least, that feature of claim 36. First, because *Crockett* does not teach quantifying at least one attribute desired by said at least one request, the system taught by *Crockett* cannot compute “a difference between the quantified at least one attribute of said resources and the quantified at least one attribute desired by said at least one request to identify at least one of said resources that is suitable for servicing said at least one request,” (emphasis added) as claim 36 requires because it makes no sense to compute a difference between a classified (not quantified beyond mere binary quantification) call type and an agent’s skill.

Second, the only computed difference that *Crockett* mentions in its disclosure is a difference between a given staff level and a needed staff level. The Office Action, at page 3, cites Figs. 1 and 2, Col. 5, lines 10-28, 35-38, 46-51, Col. 8, lines 17-37, 65-67, and Col. 9, lines 1-13 as teaching the above-identified feature of claim 36. Those passages and figures cited teach only a difference between a given staff level and a needed staff level, which is not the same as a “difference between the quantified at least one attribute of said resources and the quantified at least one attribute desired by said at least one request to identify at least one of said resources that is suitable for servicing said at least one request,” as claim 36 recites. The Office Action fails to cite Col. 5, lines 59-65, which accurately sums up the calculations performed in the system disclosed in *Crockett*:

Thus, the net staff array contains values representing the difference between a currently-scheduled staff and an amount of staff needed to handle the call type during the interval, in other words, a current estimate of the difference between the staffing level provided in the current schedule and the staffing level needed to meet current call handling requirements.

The Office Action's allegation that classifying a call as a call type and matching that call type to an agent is the same as "said means for determining computes a difference between the quantified at least one attribute of said resources and the quantified at least one attribute desired by said at least one request to identify at least one of said resources that is suitable for servicing said at least one request" ignores the language of the limitation, which not only requires "quantified attributes," but also requires "...computes a difference..." Therefore, *Crockett* does not teach each and every limitation of claim 36.

Claims 37-40 and 42-55 each depend either directly or indirectly from independent claim 36 and, thus, inherit all of the limitations of independent claim 36. Thus, *Crockett* does not teach or suggest all claim limitations of claims 37-40 and 42-55. It is respectfully submitted that dependent claims 37-40 and 42-55 are allowable at least because of their dependence from claim 36 for the reasons discussed above. Accordingly, the withdrawal of the rejections of claims 36-40 and 42-55 is respectfully requested.

**D. Claims 60, 62-67, 72-76, and 78**

Claim 60 recites, in part, "code executable to quantify at least one attribute desired by said at least one request by assigning any of more than two quantifications to said at least one attribute desired by said at least one request." As explained above with regard to other claims, *Crockett* fails to teach this feature of claim 60 because the system disclosed in *Crockett* classifies a caller by call type rather than employing "code executable to quantify at least one attribute desired by said at least one request by assigning any of more than two quantifications to said at least one attribute desired by said at least one request," as required by claim 60. Further, the qualifying or prioritizing of agent skills is not the same as "quantify at least one attribute desired by said at least one request."

Additionally, claim 60 recites, in part, "wherein said code executable to quantify at least one attribute of said resources further includes code executable to quantify "N" number of attributes of said resources and code executable to plot said quantified "N" number of

attributes within an N-dimensional space,” and “wherein said code executable to quantify at least one attribute desired by said at least one request further includes code executable to plot said quantified at least one attribute desired by said at least one request within said N-dimensional space.” *Crockett* does not teach, at least, the above-recited feature of claim 60. On pages 3-4, the Office Action cites Figs. 1 and 2, Col. 5, lines 10-28, 35-38, 46-51, Col. 8, lines 17-37, 65-67, Col. 9, lines 1-13, and Col. 10, lines 37-44 of *Crockett* as teaching the features. However, those passages fail to teach the features of claim 60. Those passages teach one graph showing an average speed of answer of a call and another graph showing a net staff per call type per scheduling interval. See Col. 9, lines 15-20. Average speed of answer and net staff per call is not the same as plotting “said quantified “N” number of attributes within an N-dimensional space” and “said quantified at least one attribute desired by said at least one request within said N-dimensional space,” which claim 60 recites. In fact, *Crockett* does not mention or teach code executable to plot any kind of attribute because the graphs employed in the system disclosed in *Crockett* are concerned with staffing levels, rather than attributes. Therefore, *Crockett* does not teach the above-identified feature of claim 60.

Still further, claim 60 recites, in part, “wherein said code executable to determine at least one suitable resource includes code executable to calculate the distance between said quantified “N” number of attributes of said resources and said quantified at least one attribute desired by said at least one request to determine at least one suitable resource for servicing said at least one request.” *Crockett* does not teach that feature of claim 60. As explained above, *Crockett* teaches classifying a caller by call type, and thus, *Crockett* does not teach a “quantified at least one attribute desired by said at least one request.” Because *Crockett* does not teach a “quantified at least one attribute desired by said at least one request,” *Crockett* cannot teach “code executable to calculate the distance between said quantified “N” number of attributes of said resources and said quantified at least one attribute desired by said at least one request,” (emphasis added) as required by claim 60. In other words, the system of *Crockett* cannot calculate a distance without first having “quantified” attributes because it makes no sense to calculate a distance between a classified (not quantified beyond mere binary quantification) call type and an agent’s skill. The Office Action’s assertion ignores the language of the claim, which requires “quantified” attributes and “...calculate the distance...” Therefore, *Crockett* does not teach that feature of claim 60.

Claims 62-67, 72-76, and 78 each depend either directly or indirectly from independent claim 60 and, thus, inherit all of the limitations of independent claim 60. Thus, *Crockett* does not teach or suggest all claim limitations of claims 62-67, 72-76, and 78. It is respectfully submitted that dependent claims 62-67, 72-76, and 78 are allowable at least because of their dependence from claim 60 for the reasons discussed above. Accordingly, the withdrawal of the rejections of claims 60, 62-67, 72-76, and 78 is respectfully requested.

V. **Claim Rejections Under 35 U.S.C. §103**

Claims 16, 18, 33, 35, 57, 59, 77, and 79 are rejected under 35 U.S.C. § 103(a) as being anticipated by *Crockett* in view of U.S. Patent 5,572,625 (hereinafter, *Raman*).

As discussed above, *Crockett* does not teach each every limitation of claims 1, 19, 36, and 60. The Office Action does not rely on *Raman* to supply those missing limitations. Thus, the combination of *Crockett* and *Raman* does not teach each and every limitation of claims 1, 19, 36, and 60. Claims 16, 18, 33, 35, 57, 59, 77, and 79 each depend either directly or indirectly from respective independent claims 1, 19, 36, and 60 and, thus, inherit all of the limitations of their respective independent claims. Thus, the combination of *Crockett* and *Raman* does not teach or suggest all claim limitations of 16, 18, 33, 35, 57, 59, 77, and 79. It is respectfully submitted that dependent claims 16, 18, 33, 35, 57, 59, 77, and 79 are allowable at least because of their dependence from claims 1, 19, 36, and 60 for the reasons discussed above. Accordingly, the withdrawal of the rejections of claims 16, 18, 33, 35, 57, 59, 77, and 79 is respectfully requested.

VI. **Conclusion**

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.



Applicant believes no fee is due with this response. However, if a fee is due, please charge Deposit Account No. 06-2380, under Order No. 47524/P102US/09901295 from which the undersigned is authorized to draw.

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Respectfully submitted,

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